

The diagram is divided into two main horizontal sections by a thick vertical line. The top section is labeled "36 Frames per Second" and the bottom section is labeled "60 Frames Per Second".

Top Section (36 FPS):

- At the top, there are three empty rectangular boxes.
- Below them, there are three empty rectangular boxes.
- Lines connect the top boxes to the bottom boxes. The first and third connections are labeled "2", and the middle connection is labeled "1".

Bottom Section (60 FPS):

- At the top, there are three empty rectangular boxes.
- Below them, there are three empty rectangular boxes.
- Lines connect the top boxes to the bottom boxes. The first and third connections are labeled "2", and the middle connection is labeled "3".

Bottom Section (24 FPS):

- At the bottom, there are two empty rectangular boxes.
- Lines connect the boxes from the 60 FPS section to these boxes. The left connection is labeled "3" and the right connection is labeled "2".

Labels and Text:

- "36 Frames per Second" is centered above the top section.
- "60 Frames Per Second" is centered above the bottom section.
- "24 Frames Per Second" is centered below the bottom section.
- "3-2 Pulldown" is centered between the 60 FPS and 24 FPS sections.

FIG. 1

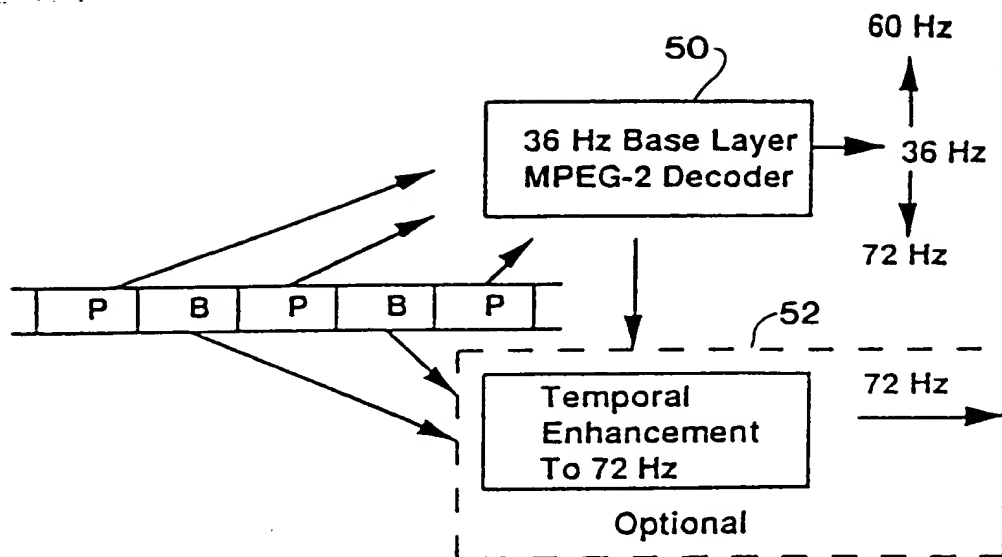


FIG. 4

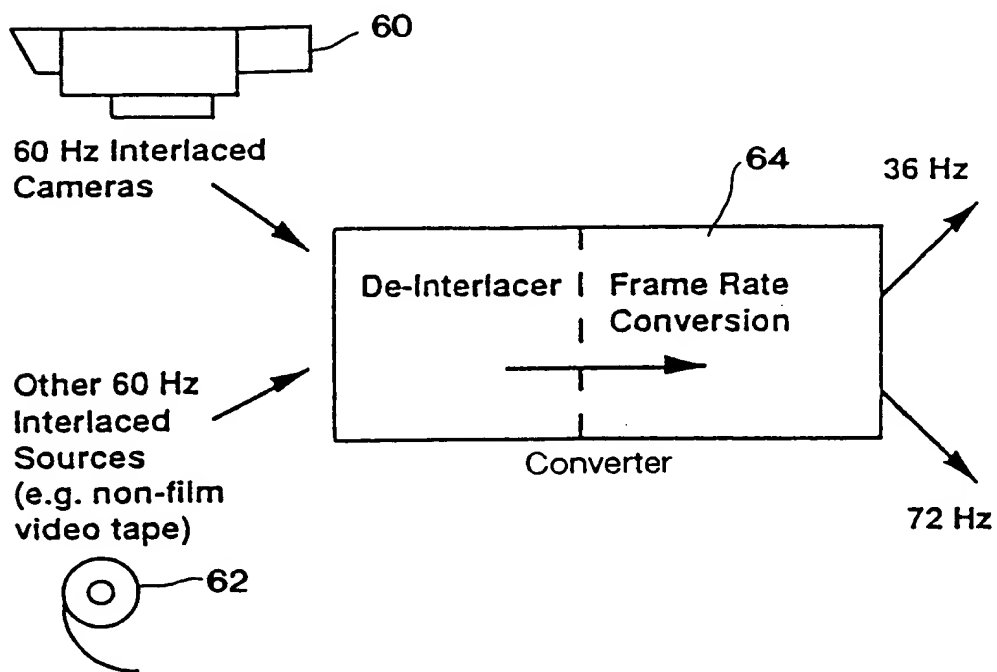


FIG. 5

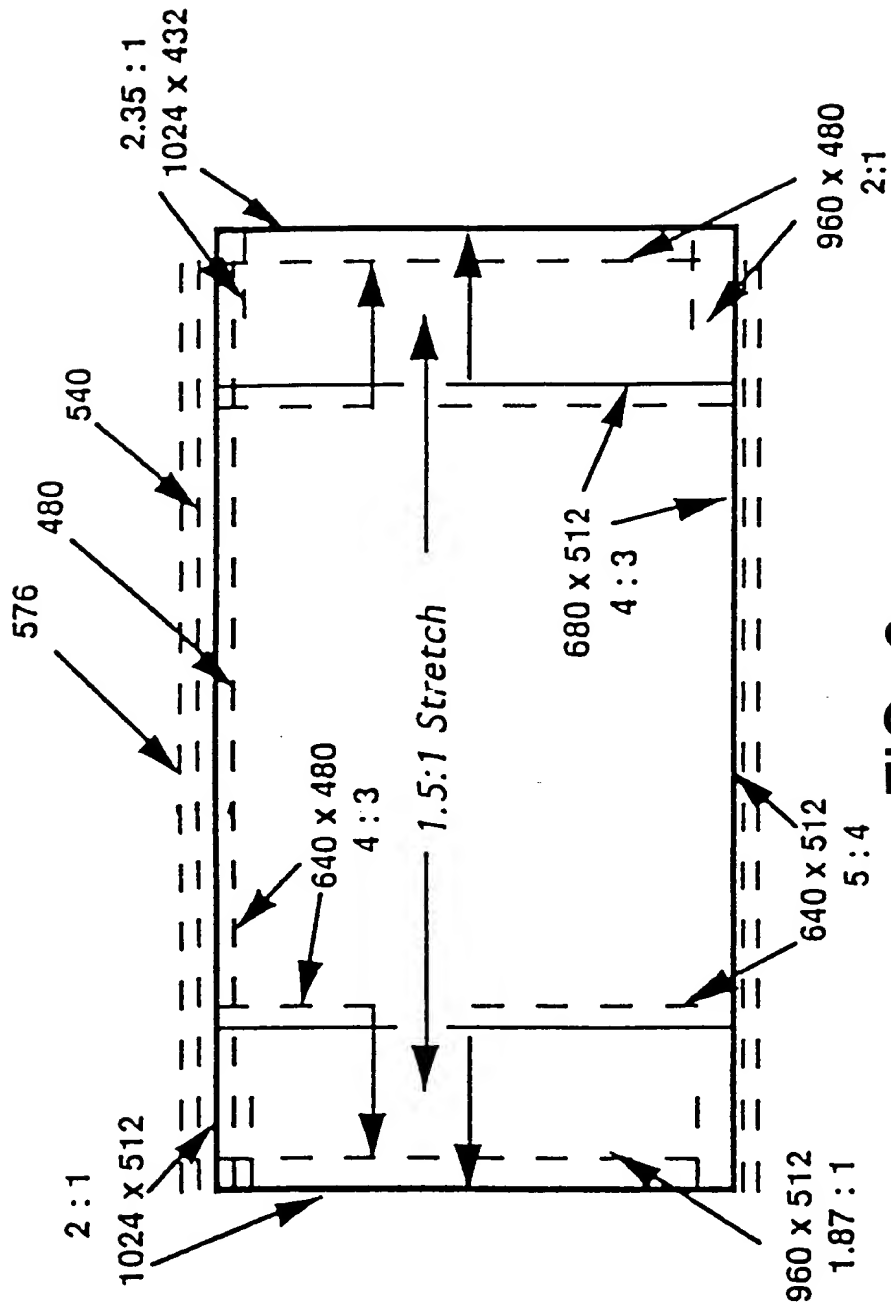


FIG. 6

The diagram illustrates the relationship between three video resolutions and their corresponding safe areas and enhancement layers:

- Top Resolution (2048 x 1024):**
 - Aspect Ratio: 2 : 1
 - Safe Area: 1152 x 864 (4 : 3)
 - Enhancement Layer: $\times \frac{4}{3}$
- Middle Resolution (1536 x 768):**
 - Aspect Ratio: 2 : 1
 - Safe Area: 864 x 648 (4 : 3)
 - Enhancement Layer: $\times \frac{3}{2}$
- Bottom Resolution (1024 x 512):**
 - Aspect Ratio: 2 : 1
 - Safe Area: 576 x 432 (4 : 3)

Additional aspect ratios and dimensions shown in the diagram include:

- 1536 x 1024 (1.5 : 1)
- 2048 x 853 (2.4 : 1)
- 1894 x 1024 (1.85 : 1)
- 1820 x 1024 (1.78 : 1)
- 1280 x 1024 (5 : 4)
- 1365 x 1024 (4 : 3)
- 1408 x 1024 (1.37 : 1)
- 1024 x 768 (4 : 3)
- 640 x 480 (4 : 3)

FIG. 7

The diagram illustrates a resolution enhancement system. It starts with a **2k x 1k Original Image** (80). This image is processed in two parallel paths. The top path involves **Filter To 1/2 Resolution** to create a **1kx512 Base Layer** (81). This layer is then **MPEG-2 Compress**ed and **Send Base Layer** (82). It is then **MPEG-2 Decompress**ed to a **1kx512** format (83), which is **Expand**d to a **2kx1k enlargement of 1k x 512 Decompressed** format (84). The bottom path involves a **Top Octave** subtraction (indicated by a circle with a minus sign) from the original image. The result is then multiplied by a **Sharpness Weight (0.25 typ.)** (indicated by a circle with an 'X'). This is followed by an **Enhancement Difference** subtraction (indicated by a circle with a minus sign) from the expanded decompressed layer (84). The final result is added (indicated by a circle with a plus sign) to the original image. The output is then **Center Weighting** and processed by a **2k x 1k Enhancement Layer Source** (86), which is **MPEG-2 Compress**ed and **Send Resolution Enhancement Layer** (87).

FIG. 8

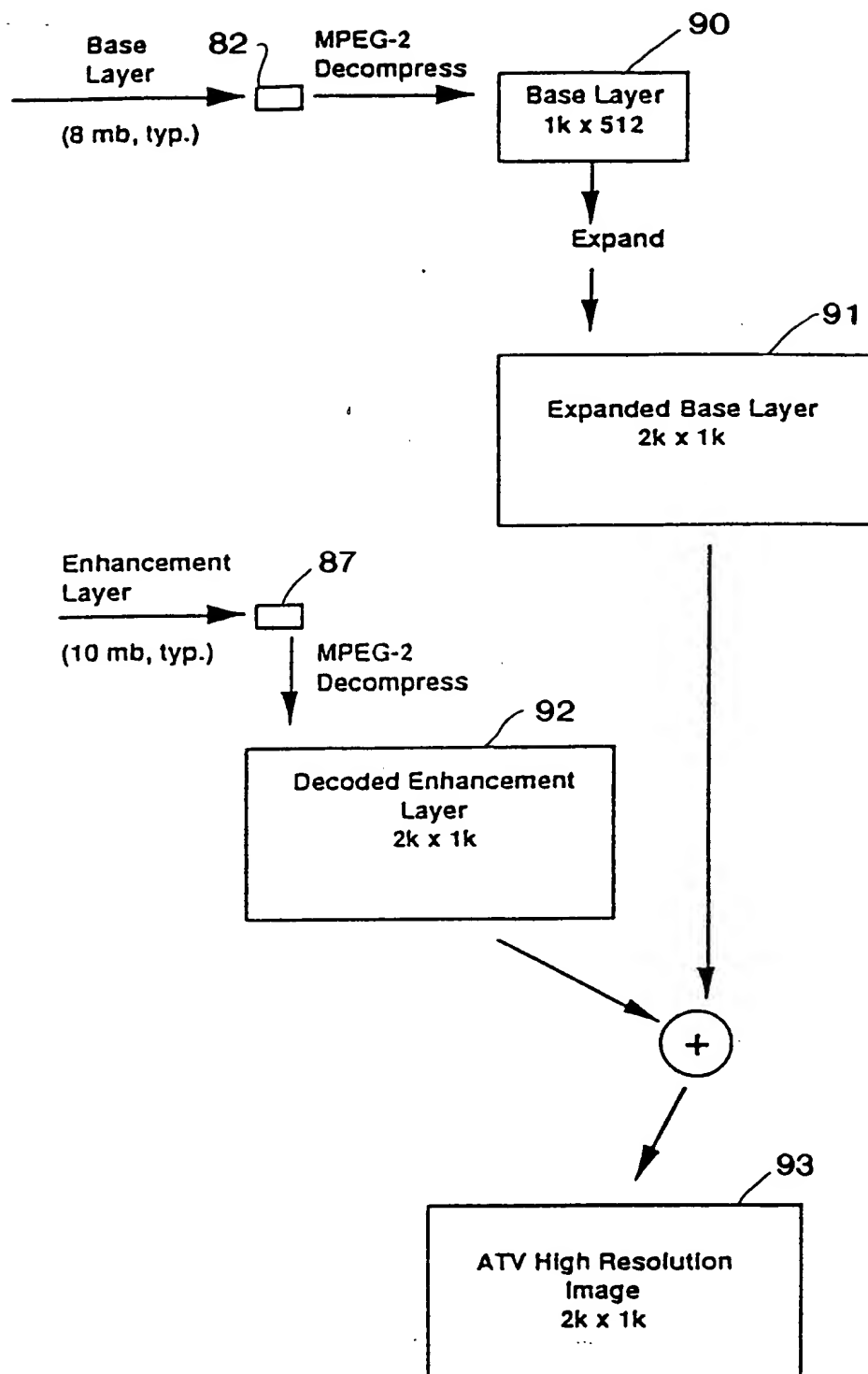


FIG. 9

00E040" T02F4560

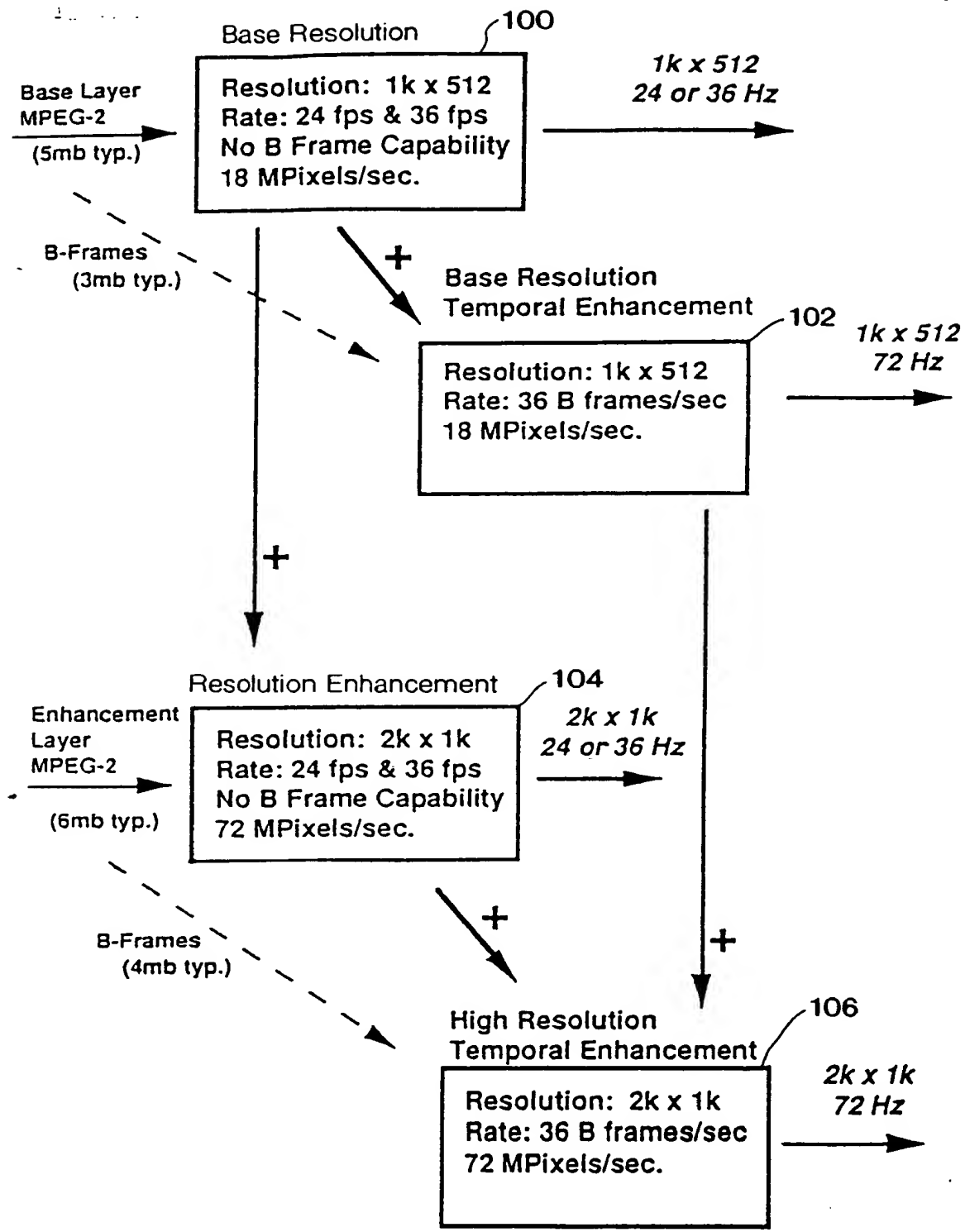


FIG. 10

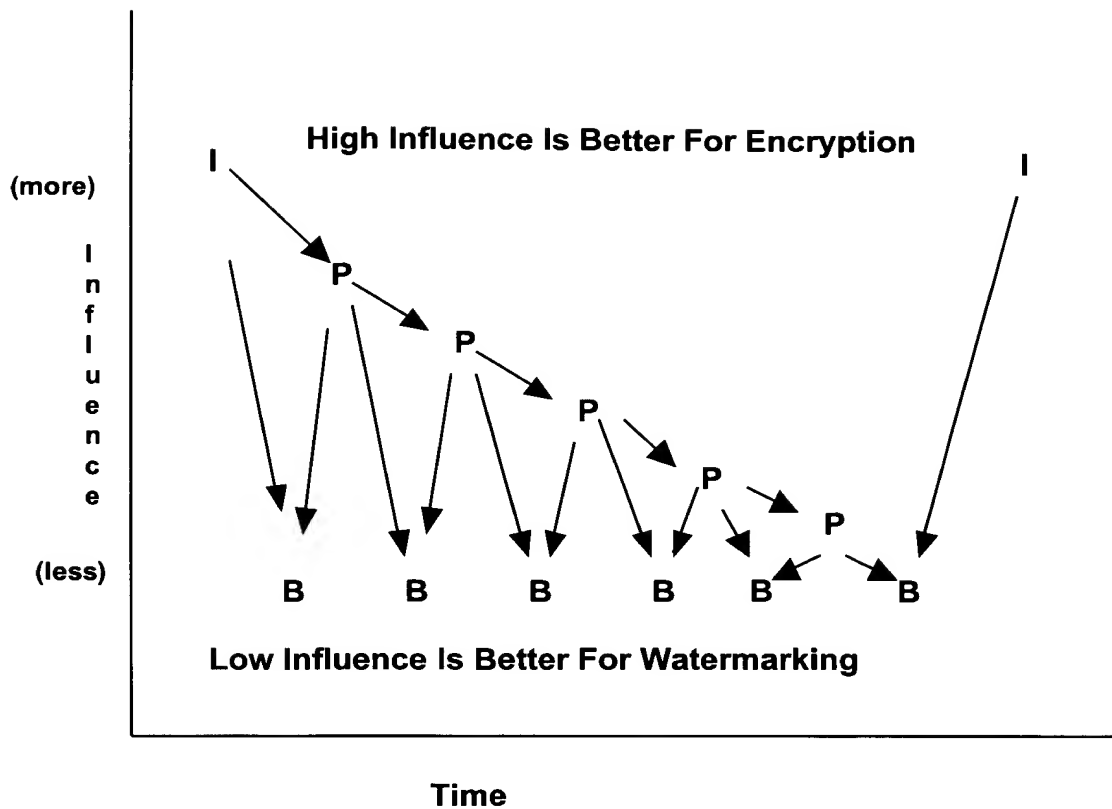


FIG. 11

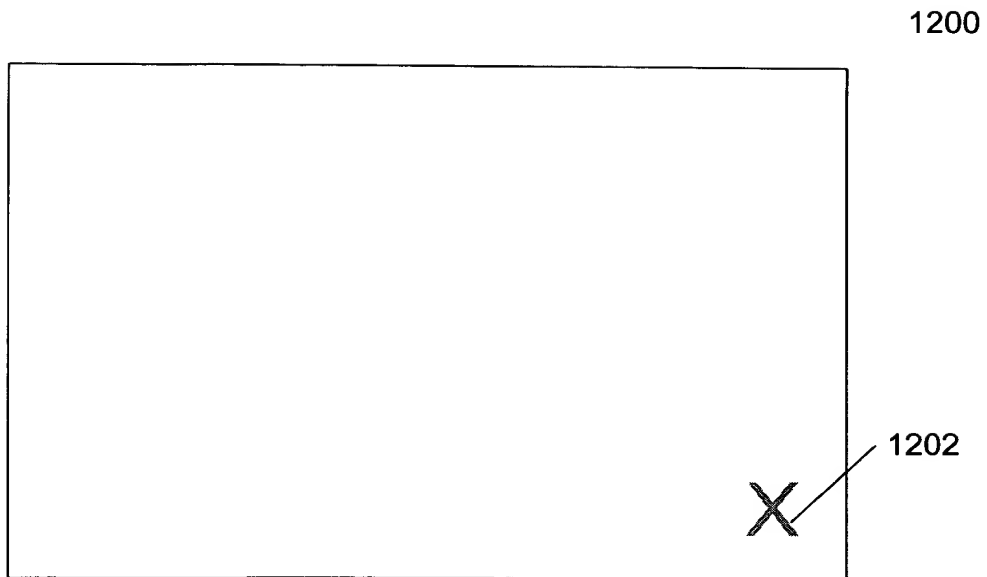


FIG. 12A

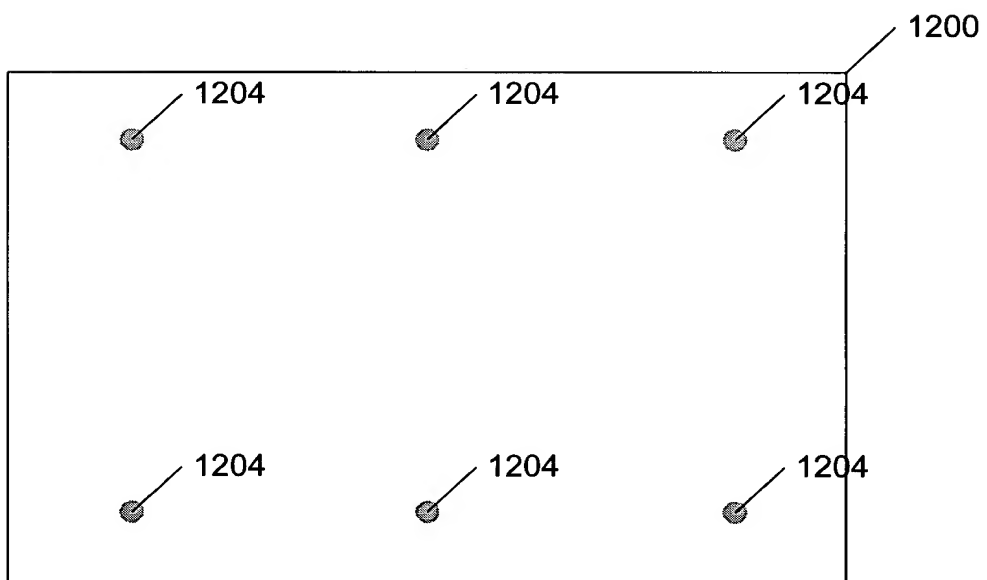


FIG. 12B

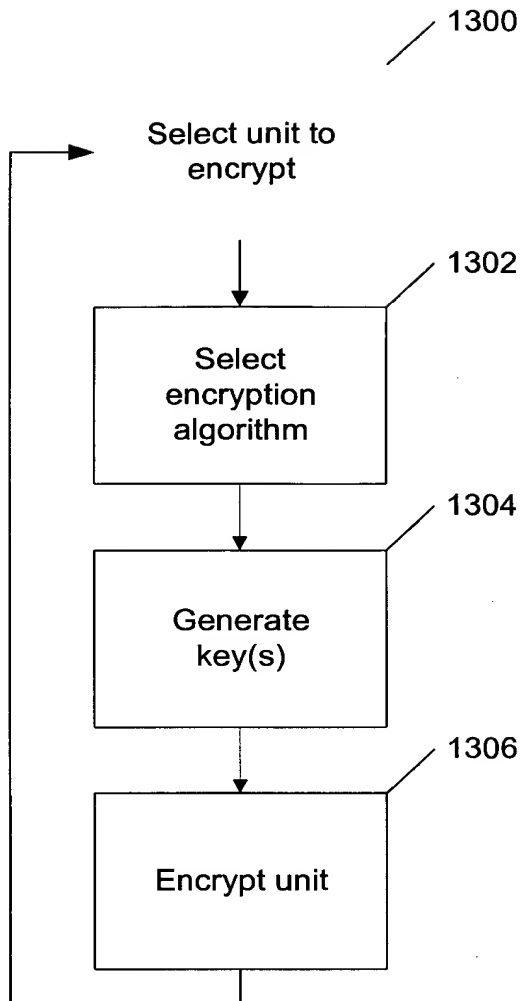


FIG. 13

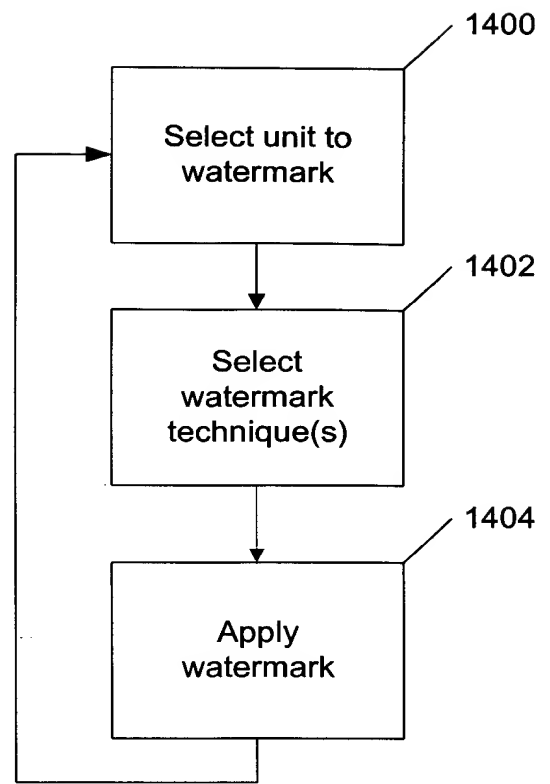


FIG. 14